



**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In application of: Chia-hung Chen et al

Serial No.: 10/626,189 Examiner: V. Ronesi

Filed: July 24, 2003 Art Unit: 1714

Docket No.: Case 5852

Title: STABILIZED PHENOLIC RESOLE RESINS COMPOSITIONS AND THEIR  
USE

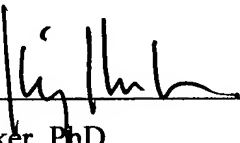
**DECLARATION UNDER 37 C.F.R. § 1.132**

I, Jorg Kroker, declare as follows:

1. I am employed by Ashland Inc. as Global Technology Director, Castings Solutions..
2. I received my PhD in Chemistry from Philipps University in Marburg, Germany.
3. I have been involved with the development of foundry binders, including phenolic urethane binders, at Ashland Inc. for about six (6) years.
4. Based upon my studies and experience with phenolic urethane binders, I have accumulated a great deal of knowledge regarding the chemical reactions involved in the curing of phenolic urethane binders and their use in the foundry industry.
5. I am a co-inventor of the invention described in the subject patent application entitled " STABILIZED PHENOLIC RESOLE RESINS COMPOSITIONS AND THEIR USE" filed in the U.S. Patent and Trademark Office under Serial No. 10/626,189 on July 24, 2003.

6. I am familiar with the Office Action mailed by Examiner Ronesi on June 28, 2005, and the rejections of claims 1-5 and 7-10 under 35 U.S.C. 102 (b) as being anticipated by U.S. Patent 6,288,139.
7. The subject invention relates to a stabilized phenolic resole resin composition useful for preparing phenolic urethane binders consisting essentially of a phenolic resole resin and an effective stabilizing amount of an ortho ester selected from the group consisting of triethyl orthoformate, trimethyl orthoformate, and mixtures thereof, such that said composition contains zero weight percent of a polyisocyanate.
8. The phenolic resole resin compositions are shelf and heat stabilized, which is demonstrated because the phenolic resole resin composition does not undergo viscosity increase or gelation, even when subjected to increased temperatures. This advantage is particularly important when the phenolic resole resin composition is stored and exposed at elevated temperatures during summer time.
9. It is essential that the phenolic resole resin compositions do not contain any polyisocyanate. The presence of even the smallest amount of polyisocyanate in the phenolic resole composition would adversely affect the stability of the composition because the polyisocyanate would react with the phenolic hydroxyl groups to form a polyurethane. This reaction would negate the advantages the invention provides.
10. I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and

further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

  
\_\_\_\_\_  
Jorg Kroker, PhD

9.1.05  
\_\_\_\_\_  
Date